REMARKS/ARGUMENTS

The Applicant thanks the Examiner for the Office Action dated December 13, 2004.

Specification

Applicant contests the Examiner's objections to the specification. Applicant has developed an integrated circuit, which is suitable for use in a print engine controller in pagewidth inkjet printers. As explained in the introductory section of the description, pagewidth printheads present unique problems in terms of the requirements of the corresponding print engine controller. As will also be appreciated from the specification, print engine controllers are necessarily complex, requiring years of research and development effort.

In response to the Examiner's assertion that Applicant should "provide a disclosure in compliance with the statues [*sic*]", it is submitted that Applicant has done precisely this by providing a detailed description of its invention in the context of its intended use in print engine controllers.

With reference to the relevant statute, 37 CFR 1.71 does not put any limitation on the maximum length of patent specifications. Moreover, 37 CFR 1.71(c) explicitly states that:

> "The best mode contemplated by the inventor of carrying out his invention must be set forth".

The best mode contemplated by the inventor for carrying out his invention is in print engine controllers for pagewidth printers. In presenting a detailed description of such print engine controllers, Applicant is merely fulfilling its statutory requirements under 37 CFR 1.71(c). This is made clear by the first paragraph of the detailed description, where it is stated:

> *It will be appreciated that the detailed description that follows takes the form of a highly detailed design of the invention, including supporting hardware and software. A high level of detailed disclosure is provided to ensure that one skilled in the art will have ample guidance for implementing the invention.*

The fact that the specification is long is merely a reflection of the complexity of print engine controllers, not a reflection of a lack of conciseness in describing print engine controllers. It is submitted that Applicant should not be penalized for making inventions in a technically demanding and complex field of art.

Drawings

1. Figure 353 has been labeled as "Prior Art". Applicant thanks the Examiner for pointing out this accidental omission.

2. Figure 411 has been amended to show the "CLK Filter" between "Ring Oscillator Circuit" and "Div5". Further, a temperature sensor connected to the "CLK Filter" has been added. Hence, Figure 411 now clearly shows the invention as claimed.

Basis for these amendments to Figure 411 can be found in Section 10.3.3 of the description (page 961, line 19 of the specification).

Claim Rejections – 35 USC § 112

Figure 348 relates to a prior art clock filter and has been labelled as such.

Figure 411 relates to the presently claimed invention.

Claim Rejections – 35 USC § 102

Claim 1 has been amended to clarify that it is under-temperature that is being filtered by the integrated circuit presently claimed.

This feature introduces no new issues for consideration by Examiner, since it was disclosed in original claims 2 and 6. Claim 2 has been deleted from the present application.

The two citations raised by examiner deal with clock manipulation in response to heat exceeding a predetermined level within an integrated circuit. This prevents damage to the integrated circuit due to self-generated heat due to normal operation of the circuit.

In contrast, the intention of the present invention is to prevent attempts to intentionally cause malfunction of a circuit by applying external heating or cooling. Changing the temperature of an integrated circuit outside of its safe operating temperature can cause unpredictable

behaviour of the logic within the circuit. In certain cases, the specific way in which particular components within a circuit misbehave in these circumstances can provide information about otherwise protected information within the circuit.

In the present case, Applicant has elected to expedite prosecution of this case by limiting claim 1 to under-temperature detection. The amendment is made without prejudice and Applicant reserves the right to file further continuing or divisional applications.

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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